

CLAIMS

I Claim:

1. An apparatus comprising:
 - a surface containing at least one embossing element;
 - the embossing element having a first sidewall angle and a second sidewall angle; and
 - wherein the first sidewall angle is different than the second sidewall angle.
2. An apparatus comprising:
 - a surface containing at least one embossing element;
 - the embossing element including a pair of exterior first sidewalls disposed at a first sidewall angle and a pair of interior second sidewalls separated by a gap, the pair of interior second sidewalls disposed at a second sidewall angle; and
 - wherein the first sidewall angle is different than the second sidewall angle.
3. The apparatus of claim 1 or 2 wherein the embossing element comprises a male embossing element.
4. The apparatus of claim 1 or 2 wherein the first sidewall angle is greater than the second sidewall angle by about 5 degrees or more.
5. The apparatus of claim 1 or 2 wherein the first sidewall angle is greater than the second sidewall angle by about 15 degrees or more.
6. The apparatus of claim 1 or 2 wherein the second sidewall angle is about 10 degrees or less.
7. The apparatus of claim 1 or 2 wherein the second sidewall angle is about 5 degrees or less.
8. The apparatus of claim 7 wherein the embossing surface comprises a metal roll.
9. The apparatus of claim 1 or 2 wherein the first sidewall angle is about 10 degrees or more.
10. The apparatus of claim 1 or 2 wherein the first sidewall angle is about 15 degrees or more.
11. The apparatus of claim 10 wherein the embossing surface comprises a metal roll.
12. The apparatus of claim 2 wherein the gap between the pair of interior sidewalls at the top of the embossing element is less than 0.030 inch.

13. The apparatus of claim 2 wherein the gap between the pair of interior sidewalls at the top of the embossing element is between about 0.005 inch to 0.030 inch.
14. The apparatus of claim 2 wherein the embossing surface comprises a metal roll.
15. The apparatus of claim 2 comprising a top radius joining each sidewall to a top of the embossing element and wherein the top radius for the pair of exterior first sidewalls is different than the top radius for the pair of interior second sidewalls.
16. The apparatus of claim 15 wherein the top radius for the pair of exterior first sidewalls is greater than the top radius for the pair of interior sidewalls.
17. A substrate embossed by the apparatus of claim 1 or 2 wherein the substrate is disposed between the apparatus of claim 1 or 2 and an elastomeric surface.
18. The substrate of claim 17 comprising at least two embossed lines wherein the distance between the embossed lines is less than 0.030 inch.
19. The substrate of claim 17 wherein the substrate comprises tissue.
20. The apparatus of claim 2 wherein the first sidewall angle is about 15 degrees or more, the second sidewall angle is about 5 degrees or less, the gap between the pair of interior sidewalls at the top of the embossing element is between about 0.005 inch to 0.030 inch, and the embossing surface comprises a metal roll.